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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,900	12/18/2000	Heung-bae Lee	Q61824	2194

7590 06/12/2007
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037-3202

EXAMINER

GHEBRETINSAE, TEMESGHEN

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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06/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Supplemental

(SF)

Office Action Summary

Application No.

09/738,900

Applicant(s)

LEE, HEUNG-BAE

Examiner

Temesghen Ghebretinsae

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/738,900
Filing Date: December 18, 2000
Appellant(s): LEE, HEUNG-BAE

Peter A. McKenna
For Appellant

SUPPLEMENTAL EXAMINER'S ANSWER

MAILED

JUN 12 2007

GROUP 2600

This is in response to the appeal brief filed December 15, 2006 appealing from the
Office action mailed 12/13/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

JP-6244754

Hiroshi

9-1994

(9) Grounds of Rejection

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The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

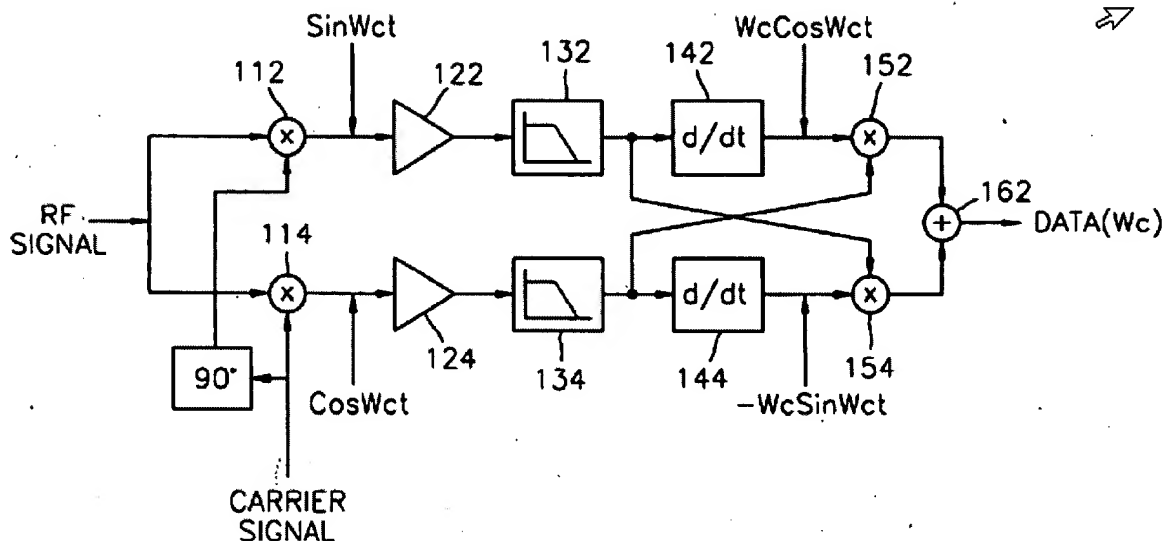
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

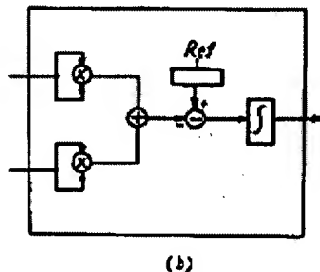
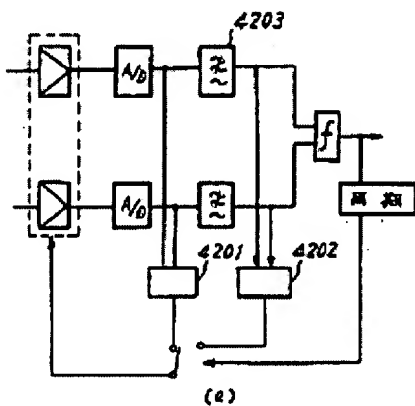
Claims 1 -3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Hiroshi (JP-6244754)

The prior art (fig.1) discloses a direct conversion demodulator in RF reception system comprising: a down mixer (112,114) for mixing a received RF signal and a carrier signals, and thereby converting the RF signal into baseband signals of channels I and Q.; a filter (132,134) for filtering high frequency component of the baseband signal; a differentiator (142,144) for differencing the baseband signal of the two channels output from the filter; a multiplier (152,154) for cross multiplying the baseband signals of the two channels output from the differentiator and the baseband signal of the two channels output from the filter; an adder (162) for adding the baseband signal of the two channels output by the multiplier and thereby detecting data.

FIG. 1 (PRIOR ART)

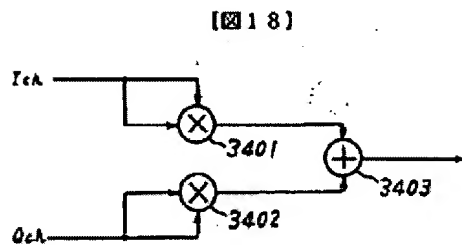
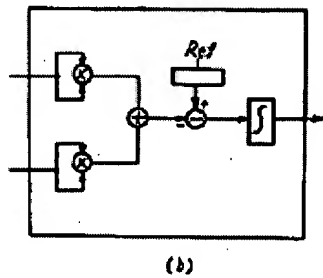


The prior art is different from the claimed invention in that a detector for detecting a gain control level and an AGC for controlling gains (270) as claimed in claims 1 and 3 is missing or not disclosed. However, Hiroshi (JP-6244754) discloses a receiver comprising down mixer (109) for mixing a received RF signal and carrier signal; a filter (110,111) for filtering high frequency components of the baseband signal; **a detector for detecting a gain control level corresponding to the difference obtained by comparing the levels of the baseband signal of the two channels output by the filter with a predetermined level (see fig.27 (a) and (b)); an AGC for controlling gains of the baseband signals for each of the two channels output from the down mixer according to the gain control level detected by the detector.**



Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the detector and AGC control 4202 (fig.27 (a), (b)) of Hiroshi in the system of the prior art so that the output signal of the prior art is maintained at a constant level and the data is detected correctly.

The detector of Hiroshi also discloses a multiplying unit for multiplying the baseband signals of the two channels with themselves; an adding unit for adding the baseband signals of the two channels multiplied by the multiplying unit and a level comparing unit for generating a gain control level corresponding to the difference obtained by comparing the levels of the signals detected by the adding unit with a predetermined level (see fig. 27(b)) as claimed in claim 2.



(10) Response to Argument

Applicant's arguments filed 12/15/06 have been fully considered but they are not persuasive.

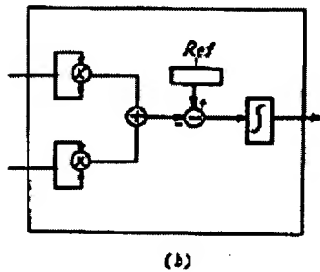
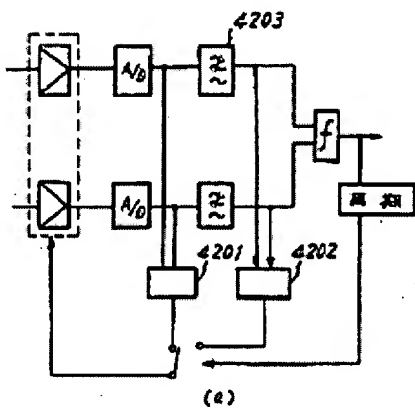
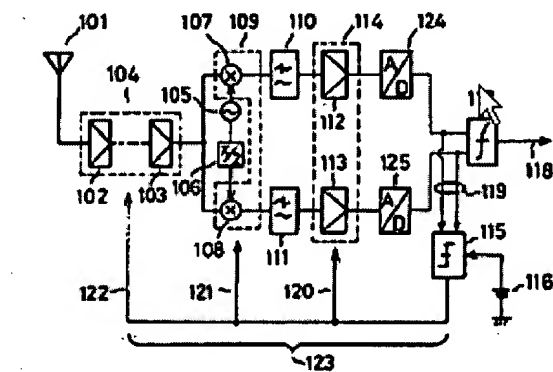
Applicant argues that fig. 27(b) shows a gain control circuit 4202 that outputs a signal based upon an integrated value of a difference between a reference signal and the sum of the two other signals. This integrated value is applied to the amplifiers and is not **analogous** to the claimed "gain control level corresponding to the difference obtained by comparing the levels of the baseband signals of the two channels output by the filter with a predetermined level" and the AGC controlling gains according to the gain control level detected by the detector. That is, because the output of element 4202 is an integrated value, it does not correspond to the output of the subtractor shown in fig.27 (b).

Examiner disagree with applicant's conclusion because Hiroshi does disclose

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a detector (4202 (a) and 4202 (b)) for detecting a gain control level corresponding to the difference obtained by comparing the levels of the baseband signals of the two channels (4203) by filter with a predetermined level. (See fig. 27 (a) and (b)) and Fig.1 (elements 115,116,119).

【図 1】



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Hiroshi further shows that the output from the subtractor being integrated. It is well settled, however, that omission of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before (In re Nelson, 40 CCPA 708).

Omission of an Element and its function is obvious if the function of the element is not desired (Ex parte Wu, 10 USPQ 2031); and In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).

Note: Applicant did not argue about claim 2 thus examiner believes that claim 2 stand or fall together with claim1.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Temesghen Ghebretinsae 4/12/07

TEMESGHEN GHEBRETINSAE
PRIMARY EXAMINER

Conferees:

Jay Patel


JAY K. PATEL
SUPERVISORY PATENT EXAMINER

Chieh Fan


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